State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-1370 FAX (603) 271-1381

Alcumet, Incorporated
ATTN: Mr. Russell F. Wilmarth, President
3 Plainview Drive
Londonderry, NH 03053

ADMINISTRATIVE ORDER
No. ARD 02-002

October 11, 2002

A. INTRODUCTION

This Administrative Order is issued by the Department of Environmental Services, Air Resources Division to Alcumet, Inc. pursuant to RSA 125-C:15. This Administrative Order is effective upon issuance.

B. PARTIES

1. The Department of Environmental Services, Air Resources Division ("DES"), is a duly constituted administrative agency of the State of New Hampshire, having its principal office at 6 Hazen Drive, Concord, NH 03301.

2. Alcumet, Incorporated ("Alcumet") is a New Hampshire corporation having a mailing address of 3 Plainview Drive, Londonderry New Hampshire 03053.

C. STATEMENTS OF FACTS AND LAW

1. RSA 125-C authorizes DES to regulate sources of air pollution in New Hampshire. RSA 125-C:4 authorize the Commissioner of DES to adopt rules relative to the prevention, control, abatement, and limitation of air pollution in New Hampshire. Pursuant to this authority, the Commissioner has adopted NH Admin. Rules Env-A 100 *et seq.*

2. RSA 125-C:6 authorizes DES to establish and operate a statewide system under which permits shall be required for the construction, installation, operation or material modification of air pollution devices and sources. Pursuant to this authority, the Commissioner has adopted N.H Admin. Rules Env-A 600.

3. Alcumet manufactures precision investment castings by using various metal alloys, including beryllium, at its facility located in Londonderry, NH ("the Facility"). During the manufacturing process, particulate matter and other regulated pollutants are emitted to the ambient air.

4. RSA 125-C:2, XI defines a stationary source as "any building, structure, facility, or installation which emits or which may emit any regulated air pollutant."

5. Env-A 101.225 defines a regulated air pollutant as, among other things, any pollutant listed in Section 112(b) List of Hazardous Air Pollutants ("HAP") of the Clean Air Act. Beryllium is listed as a HAP in Section 112(b) of the Clean Air Act, and therefore, Alcumet emits a regulated air pollutant and is a stationary source.

6. 40 CFR 61, Subpart C ("Subpart C"), codified March 31, 1971, is a National Emission Standard for Hazardous Air Pollutants that applies to among other things, a foundry.

7. Subpart C defines a "foundry" as a facility engaged in the melting or casting of beryllium metal or alloy.

8. To produce investment castings, Alcumet melts alloys containing beryllium. Therefore, Alcumet is subject to Subpart C.

9. Subpart C requires a facility to perform emissions testing within 90 days of start up unless the facility obtains a waiver of emissions testing.

10. Alcumet has been in operation since 1975 and has not conducted the emission testing or obtained a waiver as required by Subpart C.

11. RSA 125-C and Env-A 607.01(r) require stationary sources subject the National Emissions Standards for Hazardous Air Pollutants contained in 40 CFR 61 to obtain a temporary permit prior to construction, installation, operation or material modification of such source or device.

12. Env-A 1406.01 requires all stationary sources or devices that emit a regulated toxic air pollutant ("RTAPs") into the ambient air to comply with the ambient air limits established in Env-A 1400 by performing a compliance determination by May 8, 2000, using one of the methods specified in Env-A 1406.02 through 1406.05. If the compliance determination demonstrated any exceedance of an ambient air limit ("AAL"), then the source was required to submit, by May 8, 2000, a compliance plan and a permit application demonstrating how it will comply with the AALs prior to May 8, 2001.

13. Env-A 1450.01 lists the RTAPs.

14. Alcumet, utilizes metal alloys which contain metals listed as RTAPs. When emissions from the melting of these metals are released into the ambient air, Alcumet is required to demonstrate compliance with Env-A 1400. These metals include: silicon (CAS# 7440-21-3); copper (CAS# 7440-50-8); zinc (CAS# 7440-66-6); iron (CAS# 1309-37-1); chromium (CAS# 7440-47-3); beryllium (CAS# 7440-41-7); manganese (CAS# 7439-96-5); aluminum (CAS# 7429-90-5); tin (CAS# 7440-31-5); nickel (CAS# 7440-2-0); and lead (CAS# 7439-92-1). Therefore, Alcumet is a stationary source which emits RTAPs into the ambient air and must demonstrate compliance with Env-A 1400.

15. On September 30, 1982, the Environmental Protection Agency ("EPA") delegated authority to DES to implement and enforce the National Emission Standards for Hazardous Air Pollutants, including Subpart C.

16. On September 28, 1999, DES conducted a compliance inspection at the Facility and identified violations. As a result of the inspection, DES determined that Alcumet needed to obtain an air permit and needed to perform an evaluation of emissions of RTAPs.

17. On May 5, 2000, DES received a letter from Hazmateam, a consultant hired by Alcumet, on behalf of Alcumet; requesting an extension for the submittal of Alcumet's compliance plan pursuant to Env-A 1400.

18. On May 15, 2000, DES received a compliance determination that demonstrated that Alcumet exceeded the AALs for silicon, copper, zinc, iron, chromium, beryllium, manganese, aluminum, tin, nickel, and lead. In this correspondence, Hazmateam included a compliance plan with timelines for meeting the May 8, 2001 compliance date. The timeline was as follows:

a. By May 22, 2000, submit emission calculations;
b. By May 29, 2000, submit modeling data;
c. By June 9, 2000, identify compliance status with HAP requirements;
d. By June 9, 2000, determine maximum anticipated throughput for each alloy processed and project maximum actual ambient air concentrations for each RTAP;
e. By June 16, 2000, complete a review of control devices and/or stack modifications required to lower ambient air concentrations of RTAPs;
f. By July 14, 2000, conduct a pre-permit application meeting with DES;
g. By August 1, 2000, submit a permit application;
h. By January 1, 2001, install all add-on controls and/or complete all stack modifications; and
By May 8, 2001 demonstrate effectiveness of controls and/or stack modifications.

19. On May 22, 2000, DES received a letter from Hazmatean requesting that DES review the calculations used in the May 15, 2000 compliance determination.

20. On May 24, 2000, Hazmateam informed DES that Alcumet's potential to emit beryllium is 3.9 grams per day. Hazmateam also asked whether DES or EPA had the authority to grant waivers of the testing requirements in Subpart C.

21. On June 5, 2000, DES received electronic mail from Hazmateam that stated, among other things, that Alcumet "should have no problems meeting the discharge limit (of Subpart C) of 10 grams of beryllium over a 24-hr period."

22. On June 7, 2000, DES received electronic mail from Hazmateam stating that Alcumet would request a waiver from the emission testing requirements of Subpart C.

23. On July 10, 2000, DES received electronic mail from Hazmateam, stating that a permit application will hopefully be submitted to DES "within the next month". In the electronic mail Hazmateam also stated the following:

a. Alcumet would achieve compliance with Env-A 1400 through a combination of throughput restrictions and engineered controls;
b. Alcumet would like DES to conduct a Method 9 visible emissions test on the burnout oven; and
c. Alcumet personnel would like to meet with DES at Alcumet.

24. As requested, on July 31, 2000, DES conducted a site visit at Alcumet during which time DES noticed visible emissions from the burnout oven and documented in a 6-minute test that opacity was exceeding 20%.

25. Env-A 2107.01 specifies that visible stack emissions for any process shall not exceed an average of 20% opacity for any continuous 6-minute period in any 60-minute period.

26. On November 3, 2000, DES sent Hazmateam electronic mail stating that Alcumet exceeds the opacity standards from the burnout oven. In the electronic mail, DES stated that afterburners would more than likely resolve the opacity problem.

27. On January 18, 2001, Alcumet sent DES electronic mail stating that a new burnout oven would be purchased to mitigate the opacity problem.

28. On May 24, 2001, DES spoke with Hazmateam concerning Alucmet's compliance status with Env-A 1400. Hazmatean stated that Alcumet was taking steps to comply with the rule that Alcumet intended on testing within the next few weeks, would review control technology, and intended on using stack test data to demonstrate compliance.

29. On June 4, 2001, DES received a letter from Hazmateam that outlined Alcumet's plan to achieve compliance with Env-A 1400. In the letter, Hazmateam stated the following:

a. Alcumet feels that AP-42 emission factors grossly overestimate actual emissions, therefore, Hazmateam would be calculating emissions based on mass balance with verification through stack testing;
b. Alcumet would submit a permit application by mid July 2000; and
c. Alcumet would install if necessary an "air filtration device".

30. On June 14, 2001, DES received a letter from Hazmateam that summarized Alcumet's Env-A 1400 compliance demonstration. In addition, Hazmateam also submitted a proposed sampling plan. The results of the compliance demonstration indicated that Alcumet was not operating in compliance with Env-A 1400, and that there are exceedances of the AAL for several metals, including beryllium. In the letter, Hazmateam proposed stack-testing methods for the various metals used in the manufacturing process.

31. On August 6, 2001, DES staff spoke with Hazmateam to discuss emissions testing for Subpart C and the building ventilation system. Alcumet stated that the Occupational Safety and Health Agency has new beryllium exposure limits and that the building ventilation system was being upgraded. Alcumet requested that the stack testing be conducted after the modifications were completed.

32. On August 7 and 8, 2001, DES reviewed the Alcumet testing requirements and the modifications the Facility was undertaking to the ventilation system. Following that review DES concluded that since Alcumet was in the process of modifying the building ventilation system that it seemed practical to allow Alcumet to conduct the testing after the modifications are complete. This testing included the beryllium testing and the testing for the metals listed above.

33. On November 27, 2001, DES issued Alcumet a Notice Of Findings ("the Notice") identifying the violations and requesting that Alcumet submit the following information within 30 days of receipt of the Notice:

a. Submit the Facility emissions from 1994 to 2000 for the following metals: silicon, copper, zinc, iron, chromium, beryllium, aluminum, tin, nickel, and lead;
b. Submit a report of the annual emissions of ALL regulated pollutants for calendar years 1994 through 2000;
c. Submit information regarding the operation of the burnout ovens and the control equipment associated with the burnout ovens;
d. Submit information indicating how Alcumet either complies with or intends to achieve compliance with Subpart C;
e. Submit information as to how Alcumet intends to achieve compliance with the requirements listed in Subpart C, 61.33, *Stack Sampling*; and
f. Submit a compliance demonstration supporting Alcumet's claim that emissions from the Facility do not and have not exceeded the ambient air limits of Env-A 1400.

34. On December 28, 2001, DES received from Alcumet via facsimile, a letter responding to the Notice. In the letter, Alcumet stated the following:

a. By June 4, 2002, Alcumet would submit a permit application;
b. By May 1, 2002, Alcumet would complete the renovations to ventilation system;
c. By May 31, 2002, Alcumet would complete air testing and data analysis;
d. By May 31, 2002, Alcumet would calculate the Facility emissions from 1994 through 2000; and
e. By January 1, 2003 Alcumet will install a new burnout oven fitted with an after burner.

35. On January 17, 2002, DES met with Mr. Russell Wilmarth, President and CEO of Alcumet at the Facility to discuss the Notice and what was required. Alcumet informed DES that Hazmateam was no longer working on the project.

36. On January 25, 2002, Alcumet submitted a permit application.

37. On February 12, 2002, DES received additional data from Alcumet regarding the aluminum alloys and copper alloy used at the Facility.

38. On May 14, 2002, DES sent Alcumet a follow-up letter stating that Alcumet's response to the Notice did not adequately address all the violations identified in the Notice and requested that Alcumet respond within 15 days of receipt of the letter with additional information.

39. On May 20, 2002, Mr. Wilmarth called DES to schedule a meeting to discuss the Notice and DES's letter of May 14, 2002.

40. On May 22, 2002, DES sent Alcumet a letter stating that the application was administratively incomplete. In the letter, DES requested that Alcumet submit additional information within 30 days of receipt the letter.

41. On May 31, 2002, DES met with Mr. Wilmarth at the Facility. During the meeting, DES informed Mr. Wilmarth that Alcumet must perform emissions testing to demonstrate compliance with Env-A 1400 and Subpart C. During the meeting Mr. Wilmarth agreed to complete many actions by July 1, 2002 and agreed to submit to DES a letter outlining the milestones to be achieved and associated dates when the Facility would achieve compliance.

42. On June 19, 2002, DES sent Mr. Wilmarth a follow-up letter addressing items discussed at the May 31, 2002, meeting. Specifically, the letter outlined the following items that were agreed upon between DES and Alcumet:

a. By July 1, 2002, Alcumet will install and have operational the new building ventilation system;
b. By July 1, 2002, Alcumet will submit to DES a stack test protocol addressing those RTAPs emitted from the Facility;
c. By July 1, 2002, Alcumet will submit to DES a stack test protocol addressing the test procedures to be followed in accordance with Subpart C; and
d. By September 1, 2002, Alcumet will install and have operational a new burnout oven with an afterburner.

43. On June 27, 2002, Mr. Wilmarth called and informed DES that Alcumet retained the services of Calex Environmental, Inc. ("Calex") and would be meeting with Calex the week of July 15, 2002 to draft a stack test protocol.

44. On June 28, 2002, DES received from Alcumet via facsimile a letter confirming that Calex had been retained. In addition, Mr. Wilmarth stated in the letter that he would be meeting with Calex during the week of July 15, 2002, to prepare a draft stack test protocol.

45. As of the date of this Order, Alcumet has not submitted a revised stack test protocol, and has not conducted the testing required by Subpart C.

46. As of the date of this Order, information requested in the May 22, 2002, administrative incompleteness letter has not been received.

D. Determination of Violations

Alcumet has violated Env-A 607.01 by failing to obtain a Temporary Permit to Operate.

2. Alcumet has violated RSA 125-C:11,I-a by operating the casting production process without a permit.

3. Alcumet has violated Subpart C by failing to conduct emissions testing.

4. Alcumet has violated RSA 125-I:5 by failing to achieve compliance through one or more than one of the methods specified in RSA 125-I:5,II.

5. Alcumet has violated Env-A 1403.02 by failing to comply with the AALs as established in Env-A 1400 for the following metals; silicon (CAS# 7440-21-3); copper (CAS# 7440-50-8); zinc (CAS# 7440-66-6); iron (CAS# 1309-37-1); chromium (CAS# 7440-47-3); beryllium (CAS# 7440-41-7); manganese (CAS# 7439-96-5); aluminum (CAS# 7429-90-5); tin (CAS# 7440-31-5); nickel (CAS# 7440-2-0); and lead (CAS# 7439-92-1).

6. Alcumet has violated Env-A 2107 by having emissions from the burnout oven exceed 20% opacity limit.

E. Order

Based on the above findings, DES hereby orders Alcumet as follows:

1. Within 30 days of the date of this Order, submit to DES a revised stack test protocol that demonstrates how Alcumet will determine emissions of silicon, copper, zinc, iron, chromium, beryllium, manganese, aluminum, tin, nickel, and lead. The revised stack test protocol must contain a detailed description of the testing program Alcumet will follow including: a description of the process and operating conditions, the test methods to be followed, a description of the sampling locations, the analytical methods to be followed, and example calculations.

2. Within 30 days of the date of this Order, submit to DES a stack test protocol that demonstrates how Alcumet will determine beryllium emissions in accordance with Subpart C. The revised stack test protocol must contain a detailed description of the testing program to be conducted in accordance with those test procedures specified in 40 CFR 61.33, a description of the process and operating conditions, the test methods to be followed, a description of the sampling locations, the analytical methods to be followed and example calculations.

3. Within 15 days of submitting the stack test protocol, hold a pretest meeting to discuss the test programs and the stack test protocols mentioned in E.1. and 2. above.

4. Within 60 days of the date of this Order, conduct stack testing for silicon (CAS# 7440-21-3); copper (CAS# 7440-50-8); zinc (CAS# 7440-66-6); iron (CAS# 1309-37-1); chromium (CAS# 7440-47-3); beryllium (CAS# 7440-41-7); manganese (CAS# 7439-96-5); aluminum (CAS# 7429-90-5); tin (CAS# 7440-31-5); nickel (CAS# 7440-2-0); and lead (CAS# 7439-92-1); and submit the test results within 90 days of the date of this Order.

5. If the results of the testing demonstrate that Alcumet is exceeding any AALs as specified in Env-A 1450.01, then within 15 days of this determination, submit a compliance plan, with increments of progress, which demonstrates how Alcumet will comply with the appropriate AAL(s).

6. Within 60 days of the date of this Order, conduct stack testing as required by Subpart C.

7. If the results of the testing shows that Alcumet is exceeding the limit specified in Subpart C, then Alcumet must cease utilizing alloys which contain beryllium until such time that Alcumet is able to demonstrate to DES that Alcumet is complying with the limits specified in Subpart C.

8. Within 30 days of the date of this Order and in accordance with Env-A 2107.01, ensure that the emissions from the burnout oven do not exceed 20% opacity for any continuous 6-minute period in any 60-minute period.

9. Send correspondence, data, reports, and other submissions made in connection with this Administrative Order, **other than appeals**, to DES as follows:

Mike O'Brien, Senior Enforcement Engineer
Compliance Bureau
DES Air Resources Division
6 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095
Phone: (603) 271-0872
Fax: (603) 271-1381
e-mail: mobrien@des.state.nh.us

F. Appeal

Any person aggrieved by this Order may appeal the Order to the Air Resources Council by filing an appeal that meets the requirements specified in Env-C 200 within 30 days of the date of this Order. Copies of the rule are available from the DES Public Information Center at (603) 271-2975 or at http://www.des.state.nh.us/desadmin.htm. Appealing the Order does not automatically relieve Alcumet of the obligation to comply with the Order.

G. OTHER PROVISIONS

Please note that RSA 125-C provides for administrative fines, civil penalties, and criminal penalties for the violations noted in this Order, as well as for failing to comply with the Order itself. Alcumet remains obligated to comply with all applicable requirements, in particular the need to report annual emissions, pay emission-based fees and submit timely applications for permit renewal. DES will continue to monitor Alcumet's compliance with applicable requirements and will take appropriate action if additional violations are discovered.

Department of Environmental Services

Robert R. Scott
Chief Air Programs Manager
Air Resources Division

George Dana Bisbee
Acting Commissioner
Department of Environmental Services

Certified Mail/RRR: [7099 3400 0003 0687 4480]

cc: G. Rule, DES Legal Unit
NH AGO
R. Kurowski, EPA Region I
M. Oswald, Chairman of Council, City of Londonderry
Public Information Officer, DES PIP Office
File AFS# 33012590259